TETDOYEV, A.M. (Leningrad, K-18, Psochnaya ul., d. 24, kv.20)

Local hydrocortisone therapy in humeroscapular periarthritis.
Ortop. travm. i protez. 24 no.6:53-54 Je'63   (MIRA 16:12)

1. Iz 2-y khirurgicheskoy kliniki dlya usovershenstvovaniya
vrachey (nachal'nik - prof. I.D.Zhitnyuk) Voyenno-meditsinskoy
ordena Lenina akademii imeni S.M.Kirova.

TETDOYEV, A.M.   (Leningrad)

Surgical procedures for foreign bodies in the gastrointestinal
tract. Klin. med. 41 no.7:148-149 Jl'63   (MIRA 16:12)

1. Iz 2-y khirurgicheskoy kliniki dlya usovershenstvovaniya
vrachey (nachal'nik - prof. I.D.Zhitnyuk) Voyenno-meditsin-
skoy ordena Lenina akademii imeni S.M. Kirova .

TETDOYEV, A.M., podpolkovnik meditsinskoy sluzhby

Use of novocaine intravenously in treating closed cerebrocranial
trauma. Voen.-med. zhur. no.8:34-37 Ag '61.   (MIRA 15:2)
     (BRAIN—WOUNDS AND INJURIES)   (NOVOCAINE)

TETDPYEV, A.M.

Anomaly of the intestine in conjunction with perforated duodenal
ulcer. Vest.khim. 84 no.3:113-114 Mr '60.   (MIRA 13:12)
       (PEPTIC ULCER)   (INTESTINES—ABNORMITIES AND DEFORMITIES)

TETDOYEV, A.M. (Leningrad, Pesochnaya ul., 24, kv.20) ; FIRKANFF, I.V.

Spontaneous rupture of the stomach. Vest. khir. 92 no.3:134-136 Mr
'64.
(MIRA 17:12)

1. Iz 2-y khirurgicheskoy kliniki usovershenstvovaniya vrachey (nachal'-
nik - prof. I.D.Zhitnyuk) Voyenno-meditsinskoy ordena Lenina akademii
imeni S.M.Kirova.

MOROZOV, N.S. (Severomorsk, Komsomol'skaya ul. d.3, kv.52); TETDOYEV, A.M.

Treatment of epicondylitis of the shoulder with local hydrocorti-
sone injections. Ortop., travm. i protez. 26 no.12:65-66 D '65.
(MIRA 19:1)

1. Iz 2-y khirurgicheskoy kliniki dlya usovershenstvovaniya vrachey
(nachal'nik - prof.I.D.Zhitnyuk) Voyenno-meditsinskoy ordena Lenina
akademii imeni S.M.Kirova. Submitted June 9, 1965.

TETEA, Al., asist. univ. (Bucuresti)

Basutoland.   Natura Geografie 16 no. 1:79-82   Ja-F '64.

VIIAU, C.; TETEA, Maria

Pyridoxal influence on the hepatic mitochondrial transaminase
activation. Studii cerc biochimie 6 no.4:573-577 '63.

1. Facultatea de medicina generala, Bucuresti, Catedra de
biofizica.

STANESCU, S.; VIRCOL, A.; BIRTU, E.; TETEL, E.; VIRCOL, L.; MARCULESCU, I.;
    CUTE, E.; AVADANEI, A.; BURCIU, O.;CICBANU, S.; ILIE, E.; MOTEA, I.

Hydrographic basin of the Mures River;a hydrologic monograph.
Studii hidrol 6:3-273 '63.

AFANAS'YEV, I.N.; MOROZOV, M.V.; TETEL'BAUM, A., red.

[Diagnostics and specialization in the maintenance and
repair of motor vehicles; from the work practice of
automotive transportation units of the Latvian S.S.R.]
Diagnostika i spetsializatsiia v tekhnicheskom obslu-
zhivanii i remonte avtomobilei; iz opyta raboty avto-
khoziaistv Latviiskoi SSR. Riga, Latviiskoe gos. izd-
vo, 1964. 118 p.   (MIRA 18:4)

L 15271-65   EWT(d)/EWT(m)/EEC(k)-2/EEC-4/EWP(t)/EWP(b)   Po-4/Po-4/Pg-4/Pk-4/

ACCESSION NR: AP4048391   S/...8;/64/006/011/3222/3226

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.; Popov,
Yu. S.

TITLE: On the depth of penetration and distribution of radiation
damage when germanium is bombarded with argon and nitrogen ions

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3222-3226

TOPIC TAGS: germanium, radiation defect, ion bombardment, surface
layer, semiconductor material

ABSTRACT: In view of the practical interest associated with the
use of ion beams in semiconductor technology, the authors measured
the thickness   of the inversion layers produced on n-type germanium
bombarded with argon and nitrogen ions of energies of 40, 60, and 82 kev.
The germanium was in the form of plates 5 x 5 x 1 mm with resistivity of
1 ohm-cm, cut perpendicular to the ...   ... The plates were care-

Card   1/3

L 15271-65
ACCESSION NR: AP4048301

fully ground and chemically polished ... surface was uni-
form within 0.2 micron. The ion bombardment was produced in an ac-
celerator with magnetic ... layer after irradi... the surface resistivity
was measured after each ...

... isotopes and Mass Spectrometer ... The thick-
ness of the inversion layer increases with ... and energy and
radiation dose, and is larger for ... ions,
although the experimental ... theory. The depth ...
the inversion layers were determined ... conductivities in
sufficiently large doses of ... established that
... of the inversion layer a high-resistance region whose thickness
increases with the dose. It is ... high-resistance
layer is due to   disordering of the crystal structure of the ger-

Card 2/3

L 15271-65
ACCESSION NR: AP4048391

manium; this hypothesis is confirmed by electron diffraction data.
"St..
....
.... formu-

ASSOCIATION: Gor'kovskiy gosudarst................................ im. N. I.
.... State Univers..............

SUBMITTED: ...164   ENCL: 00

NO REF S.. 001   OTHER: 011   SUB CODE: SS, NP

                                                     ATD PRESS: 3143

Card   ...

GTRSPL, Vol. 1 No. 7

Tetelbaum,
    A new method of modulation with high frequency.

Proceedings of the Electro-Industry of Weak Currents, U.S.S.R., #1, 1936.

Translation Available at Brookhaven National Laboratory.

ZAYETS, I.L.; TETEL'BAUM, A.A.; KOVTUSHENKO, A.A.; KARPYSHEV, M.S.;
KUBYSHKIN, B.A.; LEBEDEVA, N.I., nauchnyy red.; MOROZOVA,
L.A., red.; VINOGRADOV, Ye.A., tekhn. red.

[Shape mills; catalog and manual]Sortovye stany; katalog-
spravochnik. Moskva, TsINTIMASH, 1962. 62 p.
(MIRA 15:11)

1. Elektrostal'skiy zavod tyazhelogo mashinostroyeniya.
(Rolling mills—Catalogs)

USSR / Human and Animal Physiology.   Internal Secretion, Adrenals.   T

Abs Jour   : Rof Zhur - Biol., No 15, 1958, No. 70413

Author   : Tetol'baum, A. G.
Inst   : Not givon
Titlo   : Comatoso Statos in Adronal Insufficioncy

Orig Pub   : Probl. Endokrinol. i Gormonotorapii, 1957, Vol 3, No 1,
              57-61

Abstract   : No abstract givon

Card 1/1

113

USSR/Human and Animal Physiology - Circulation.

Abs Jour   : Ref Zhur - Biol., No 2, 1958, 8635

V-4

Author   : A.G. Tetel'baum

Inst   : —

Title   : An Apparatus for Measuring Venous Pressure

Orig Pub   : Klinich. meditsina, 1957, 35, No 5, 149-151

Abstract   : No abstract.

Card 1/1

TETEL'BAUM, A.G., professor (Moskva)

Comatous states in adrenal insufficiency. Probl.endok. i gorm. 3
no.1:57-61 Ja-F '57.
(MIRA 10:6)

1. Iz terapevticheskoy kliniki (dir. - prof. P.L.Sukhinin)
Moskovskogo gorodskogo nauchno-issledovatel'skogo instituta skoroy
pomoshchi imeni Sklifosovskogo (dir. - zasluzhenyy vrach USSR
M.M.Tarasov).
    (ADRENAL CORTEX, diseases,
        insuff. causing coma (Rus))
    (COMA, etiology and pathogenesis,
        adrenal cortex insuff. (Rus))

"Apparatus for the Measurement of Venous Pressure," by Prof. A.G. Tetel'baum (Moscow), Therapeutic Clinic (Supervisor - Prof. A.A. Gerke) of the Moscow City Scientific Research Institute of First Aid imeni Sklifosovskiy (Director - Honored Physician of the Ukrainian SSR M.M. Tarasov), Klinicheskaya Meditsina, No 5, May 1957, pp 149-151.

An apparatus for measuring venous blood pressure is described which allegedly eliminates the deficiencies of other similar instruments. It permits the reiterative measurement of venous pressure without removing either the pressure gauge or the needle. This is achieved by providing the bulb of the manometric tub with a faucet; while an outlet on the other side of the bulb is connected by a rubber pipe and a glass tube fitted with a needle.

Two pictures of the manometer are included.

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TEYTEL'BAUM, A.G.,professor(Moskva)

Changes in shoulder joints in myocardial infarct and angina
pectoris. Klin. med. 34 no.1:51-58 Ja '56
(MIRA 9:5)

1. Iz terapevticheskoy kliniki (rukovoditel'-prof. A.A. Gerke)
Moskovskogo gorodskogo nauchno-issledovatel'skogo instituta
skoroy pomoshchi imeni N.V. Sklifosovskogo (dir.-zasluzhennyy
vrach USSR M.M. Tarasov)
    (MYOCARDIAL INFARCT, compl.
        pain of shoulder joint)
    (ANGINA PECTORIS, compl.
        same)
    (SHOULDER, dis.
        pain, caused by myocardial infarct & angina pectoris)

TEIL'BAUM. A. C.

"Arterial Pressure in Different Vascular Regions in Man and Regional Hypertonia," Klin. Med., 26, No. 5, 1948. Prof., Moscow, -cl948-.

TETEL'BAUM, A.G.

Problem of pain-free pancreatitis. Klin. med. 38 no. 4:96-100
Ap '60.
(PANCREAS—DISEASES)   (MIRA 14:1)

TETEL'BAUM, Aleksey Grigor'yevich

[Clinical types and forms of stenocardia and the elements of myocardial infarct] Klinicheskie tipy i formy stenokardii i nachala infarkta miokarda. Moskva, Medgiz, 1960. 205 p.

(ANGINA PECTORIS)   (HEART--INFARCTION)   (MIRA 13:8)

Pa

116

Blood gases in pulmonary insufficiency. A. G. Teich.
Baum. Klin. Med. (U.S.S.R.) 25, No. 1, 45-52(1947).
In pulmonary insufficiency blood O decreases and CO₂
increases.   H. L. Williams

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GINSBURG, V.A.; DUBOV, S.S.; MEDVEDEV, A.N.; MARTYNOVA, L.L.; TETEL'BAUM, B.I.;
VASIL'YEVA, M.N.; YAKUBOVICH, A.Ya.

Structure of the inclusion complexes of trifluoronitrosomethane with
unsaturated compounds and the mechanism of their formation. Dokl.
AN SSSR 152 no.5:1104-1107 O '63.   (MIRA 16:12)

1. Predstavleno akademikom I.L.Knunyantsem.

L 11373-63   BDS   S/120/63/000/002/026/041   49

AUTHOR: Tetel'baum, B. I., Gilazov, N. A., and Luganskiy, G. M.

TITLE: NMR spectrometer with a stabilized magnetic field

PERIODICAL: Pribory i tekhnika eksperimenta, March-April 1963, v. 8, no. 2,
               111-113

TEXT: The article describes a spectrometer that has a stabilized magnetic
field and uses standard circuits. The resolution of the instrument is $\sim 1.5 \cdot 10^{-6}$
without rotation of the sample and $4 \cdot 10^{-7}$ with rotation of the sample. The
statistical measurement error is less than 1 percent when the lines are $\sim 100-1000$
cps apart. Further line-separation leads to increased error owing to deteriora-
tion of very-low frequency stabilization. There are five figures.

SUBMITTED: May 7, 1962

Ja//
Card 1/1

ROBERTS, Dzhon D. [Roberts, J.D.], prof.; TETEL'BAUM, B.I. [translator]

Nuclear magnetic resonance spectroscopy and its uses in theoretical
organic chemistry. Zhur. VKHO 7 no.4:367-373 '62. (MIRA 15:8)
(Nuclear magnetic resonance and relaxation)
(Spectrum analysis) (Chemistry, Organic)

DUBOV, S.S.; TETEL'BAUM, B.I.; STERLIN, R.N.

  Nuclear magnetic resonance of some perfluorovinyl derivatives.
  Zhur. VKHO 7 no.6:691-692 '62.   (MIRA 15:12)
                    (Vinyl compounds—Spectra)

TETEL'BAUM, B.I.; GILAZOV, N.A.; LUGANSKIY, G.M.

Nuclear magnetic resonance spectrometer with magnetic field stabilization.
Prib. i tekh. eksp. 8 no.2:111-113 Mr-Ap '63.   (MIRA 16:4)
    (Nuclear magnetic resonance and relaxation)   (Spectrometer)

PAVLOV, P.V.; ZORIN, Ye.I.; TETEL'BAUM, D.I.; POPOV, Yu.S.

Penetration depth and distribution of radiation damage in
germanium due to bombard ent with argon and nitrogen ions.
Fiz. tver. tela 6 no.11 3222-3226 N '64.

(MIRA 18:1)

1. Gor'kovskiy gosudarstvennyy universitet imeni N.I.Lobachevskogo.

ACCESSION NR: AP4147??

AUTHORS: Koran, Ye. I.; ???? ????;
Granitsy*nd. Z. R.

TITLE: Change in the properties of the surface layer of n-germanium
following bombardment by nitrogen ions with ?????? ? kev

SOURCE: Fizika tverlgo tela, ?. ?, ?????? ?, ?????????

TOPIC TAGS: germanium ?????? ???? ?? ??? germanium, radia-
tion damage, lattice defect radiation ??? ?? ??? ???ardment

ABSTRACT: The effect of ion bombardment ?? ??? ?? was investi-
gated in the dose interval ??????? ????? ?? ?? ? measuring not
only the rectifying characteristics ?? ?? ?? ?? ?ld ????iguous
results, but also by using four probes ?? ? ?? ??? specific re-
sistivity and by using a thermal probe ?? ?? ?? the thermal emf
of the sample. The samples were ??? ?? ?????? ?? ates with spe-

ACCESSION NR:

ASSOCIATION:

Card 2/5

ACCESSION NO: AP4041772

Konskov, gosudarstvennom ... Institute of the Gor'ki, State University

SUBMITTED: 20Jan64   ENCL: 02

SUB CODE: EC, BS   NR REF S...   OTHER: 509

L 15977-66   EWT(1)/EWT(m)/T/EWP(t)   IJP(c)   JD/AT

ACC NR: AP5021276   SOURCE CODE: UR/0020/65/163/005/1128/1130

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.; Popov, Yu. S.

ORG: Gorki Physicotechnical Research Institute of the Gorki State University im.
N. I. Lobacheskiy (Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut;
Gorkovskiy.gosudarstvenniy universitet):

TITLE: Donor properties of nitrogen injected into silica and germanium by ion
bombardment

SOURCE: AN SSSR. Doklady, v. 163, no. 5, 1965, 1128-1130

TOPIC TAGS: ionising radiation, nitrogen, argon, ion current, ion density, silica,
crystal structure

ABSTRACT: The silica plate samples, having a resistivity of 1 ohm.cm., were cut

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L 15977-66

ACC NR: AP5021276 O

perpendicular to the crystallographic direction [111] , polished mechanically
and chemically to a microscopically smooth surface, and subjected to bombard-
ment by atomic nitrogen ions in an accelerator with magnetic analyzer at an energy
of 57 kev. The density of the ion current was $\leq$ 4 amp./sq.cm. and the vacuum
near the target was ~10^{-5} mm.Hg. After irradiation the samples were annealed
at various temperatures in a 10^{-5} mm. Hg. vacuum. The n-type layer was formed
on irradiated silica surfaces (at the dose range of 50 - 5000 coulomb/sq.cm.)
after short annealing (1-3 minutes) at temperatures $\geq$ 700C, whereas the
inversion layer was not observed even after an annealing for 4 hours at temper-
atures $\geq$ 500C. The fact that inversion layers were formed only after annealing
at sufficiently high temperatures indicated that their generation was affected
by the donor properties of the nitrogen. The bombardment of silica plates with
argon ions did not result in the formation of inversion layers after subsequent
annealing at various temperatures. The bombardment of p-type germanium ($\rho = 1$
ohm.cm.) by nitrogen ions resulted in the formation of n-layers at doses >1000

Card 2/3

L 15977-66

ACC NR: AP5021276

coulomb/sq.cm. after prolonged annealing at 450C. The annealing at lower temperatures was evidently insufficient for removal of radiation defects. The thermoconversion occured at temperatures ≧ 500C. Orig. art. has: 1 figure.

SUB CODE: 20   SUBM DATE: 06Jun65/ ORIG REF: 001/ OTH REF: 006

Card 3/3

L 26620-66   EWT(1)/EWT(m)   IJP(c)   JD/JG

ACC NR: AP5025369   SOURCE CODE: UR/0181/65/007/010/2940/2946

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.; Granitsyna, Z. K.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosu darst-vennyy universitet)

TITLE: Investigation of electrical conductivity of inversion layers forming in n-type silicon during bombardment by boron ions

SOURCE: Fizika tverdogo tela, v. 7, no. 10, 1965, 2940-2946

TOPIC TAGS: electric conductivity, silicon single crystal, boron, ion bombardment

ABSTRACT: Results were presented of measuring electrical conductivity of inversion layers formed in n-type silicon as a result of bombardment of the surface by boron ions with energies of 25-150 kev. Dependence of electrical conductivity of an inversion layer, formed during boron ion bombardment, on dosage and annealing temperature has qualitatively,a similar character during all energies in the diapazone studied. The effect was studied of radiation dose, temperature and annealing time. With any dosage in the 1-1000 microcoulomb . cm^{-2} range, a sufficiently high annealing temperature leads to an electrical conductivity

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L 26620-66

ACC NR: AP5025369

value corresponding to the quantity of boron atoms introduced. The greater the dosage, the higher the annealing temperature needed to reach this state. This possibility of developing inversion layers during bombardment without subsequent annealing was indicated. With a sufficiently large dose of boron ions the effect of injected boron atoms prevailed under the influence of radiation defects; thus the formation of p-type layer in n-silicon was possible without additional annealing. Orig. art. has: 4 figs.

SUB CODE: 20/   SUBM DATE: 03Apr65/ ORIG REF: 004/ OTH REF: 009

Card 2/2

L 22918-66   EWP(e)/EWT(m)/EWP(t)   IJP(c)   JD

ACC NR: AP6009655   SOURCE CODE: UR/0181/66/008/003/0750/0752

AUTHORS: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Characteristics of photodiode obtained by bombarding silicon with boron ions

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 750-752

TOPIC TAGS: silicon, ion bombardment, photodiode, pn junction, boron, photosensitivity, spectral energy distribution

ABSTRACT: In view of some contradictions in the published data on the production of photoelectric p-n junctions by ion bombardment, the authors investigated the dependence of the characteristics of photo-diodes obtained by bombarding n-silicon with 60-keV boron ions on the irradiation dose and on the annealing temperature. The n-type silicon was doped with phosphorus and was externally oxidized to an oxide thickness of $0.7\ \mu$. Windows of $500\ \mu$ diameter were etched on the

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L 22918-66.

ACC NR: AP6009655   C.

oxide surface by photolithography. A second oxidation covered the windows with a layer of SiO_2 of 0.2 μ thickness. The bombardment with 68-kev boron ions was in an accelerator with a magnetic analyzer. The irradiation doses were 0.1, 10, 100, 300, 500, and 700 $\mu C/cm^2$. The annealing temperature varied from 600 to 1,000C and the annealing time from 3 to 30 minutes. At 0.1 $\mu C/cm^2$ the diodes had very poor photoresponse at all annealing temperatures. At doses above 100 $\mu C/cm^2$ the photosensitivity decreased. Removal of layers of different thicknesses has shown that the dislocations penetrate to a depth of approximately 1 μ, whereas the p-n junction lies 0.5 μ thick, so that the dislocations can participate in the excess carrier recombination on both sides of the junction. The dependence of the photocharacteristics on the annealing temperature is attributed to the fact that with increasing dose a high temperature is necessary to anneal out the defects that influence the conductivity of the inversion layer. A preliminary investigation of the spectral characteristics of the photodiodes has shown that their maximum sensitivity is at 0.85 -- 1.1 μ wavelength, and that this maximum shifts towards longer wavelengths with increasing

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L 22918-66

ACC NR: AP6009655

dose. This can be attributed to the fact that the short wave section
of the spectrum is more sensitive to the presence of defects in the
surface layer. Yu. Vladimirskiy and Yu. Pleytukh participated in the
work. Orig. art. has: 1 figure

SUB CODE: 20/ SUBM DATE: 19Jul65/ ORIG REF: 002/ OTH REF: 003

Card 3/3

L 41569-66   EWP(S)/EWT(m)/EWP(t)/ETI   IJP(c)   JD/JH

ACC NR: AP6018541   SOURCE CODE: UR/0181/66/008/006/1791/1795

AUTHOR: Pavlov, P. V.; Zorin, Ye. I.; Tetel'baum, D. I.

ORG: Gor'kiy State University im. N. I. Lobachevskiy (Gor'kovskiy gosudarstvennyy universitet)

TITLE: Inversion layers produced on n-type germanium bombarded with boron and aluminum ions

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1791-1795

TOPIC TAGS: germanium semiconductor, surface property, ion bombardment, boron, aluminum, impurity conductivity

ABSTRACT: To check whether the inversion layer produced on the surface of germanium by ion bombardment depends on the type of ion used, the authors bombarded germanium with 50-kev ions of several elements (B, Al, Ne, Ar, C). The irradiation procedure was described before (FTT v. 6, 3222, 1964). The ion current was ~5 $\mu a/cm^2$ and the dose ranged from 0.01 to 1000 Coul/cm^2. The presence of the inversion layer was determined by a procedure described in the earlier paper, and the resistivity of the inversion layer was measured both directly after irradiation and after annealing; in the latter case the dependence on the annealing temperature was also measured. In addition, a study was made of the depth distribution of the acceptors (Al and B) introduced by ion bombardment. The results show clearly that the surface resistance depends in a complicated manner on the type of bombarding ion, the irradiation dose,

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L 41589-66

ACC NR: AP6018541 /

and the annealing temperature, and that in the case of bombardment with boron and aluminum ions, the latter behave like ordinary acceptors. Consequently, the introduction of active impurities by ion bombardment is applicable not only to silicon $1/$ but also to germanium. The effect of other elements on the inversion layer of germanium calls for additional study. Zh. Verevkina participated in the work. Orig. art. has: 4 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 03Nov65/ ORIG REF: 004/-- OTH REF: 007

Card 2/2

ACC NR: AP7007168   SOURCE CODE: UR/0070/67/012/001/0155/0157

AUTHOR: Pavlov, P. V.; Tetel'baum, D. I.; Zorin, Ye. I.; Kudryavtseva, R. V.

ORG: Gor'kiy Physicotechnical Research Institute (Gor'kovskiy issledovatel'skiy fiziko-tekhnicheskiy institut)

TITLE: The amorphism in polycrystalline germanium films resulting from irradiation with argon ions

SOURCE: Kristallografiya, v. 12, no. 1, 1967, 155-157

TOPIC TAGS: amorphous polymer, semiconducting film, polycrystalline film , germanium semiconductor, thin film semiconductor, irradiation effect , argon, ion

ABSTRACT: An investigation was made of the transition of crystalline germanium into the amorphous state as the result of irradiation. The experiment was performed with thin polycrystalline germanium films. The films were obtained by the vacuum coating of an NaCl backing heated to 400°C. The film thickness varied from 200 to 500 Å, which meant that it was smaller than the mean free path of the ions. Bombardment with ... kev argon ions was performed in an accelerator with a magnetic analyzer. The density of the ion current was 2 to 4 μ amp/cm^2. The irradiation doses were 1, 10, 100, 1000, and 5000 μcurie/cm^2. The vacuum in the

Card 1/2   UDC: 548.74

ACC NR:AP7007168

-5
vicinity of the target was 2×10^{-5} mm Hg. During bombardment, the specimens were heated to 90°C in order to reduce organic vapors. At a does of 1 μcurie/cm² no changes were observed in the specimens. However, at doses of 10 μcurie/cm² and larger, the electronograms clearly indicated the transformation of the germanium into the amorphous state: the sharp lines disappeared and were replaced by two or three diffusion rings. The location of the intensity maxima did not coincide with the location of the interference rings of the crystalline germanium, except for the first maximum, which was located at the position of the (111) line. This showed that the structure obtained was not microcrystalline, but amorphous. Two basic mechanisms of amorphism are proposed. First, a gradual accumulation of Frenkel defects during irradiation can lead to the dispacement of atoms to new positions and, consequently, to the disruption of proper order. The second mechanism consists in the generation of regions of local fusion (thermal peaks) inside the germanium by means of retarded ions. These peaks harden in a short time ($10^{-11} - 10^{-12}$ sec). Crystallization cannot occur in such a short time. As a result, a liquid structure or some intermediate state (partial crystallization) appears. The first mechanism is considered more probable. Orig. art. has: 1 table.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 011 [WA-95]
Card 2/2   [JA]

SERENSEN,S.V.; TETEL'BAUM,I.M.; PRIGOROVSKII,N.I.

[Dynamic strength in machine construction] Dinamicheskaia prochnost' v mashinostroenii, 2. perer. izd. Moskva, Gos. nauch.-tekhn. izd-vo mash-stroit. lit-ry, 1945. 327 p.
(Machinery--Testing)   (MIRA 8:6)

TETEL'BAUM, I. M. Dr. Tech. Sci.

Dissertation: "Investigation of the Torsional Vibrations of Piston Engine Shafts by the Method of Electric Modeling." Moscow Order of Lenin Aviation Inst., imeni Sergo Ordzhonikidze, 28 Apr 47.

SO: Vechernyaya Moskva, Apr, 1947 (Project #17836)

TETEL'BAUM, I.M.

Elektricheskoe modelirovanie kak metod issledovaniia dinamicheskikh drutil'nykh nagruzok valov porshnevykh dvigatelei. (In; Serensen, S.V Dinamika i prochnost' kolenchatykh valov. Moskva, 1948. p. 140-169, illus., tables, diagrs., bibliography)

Title tr.: Electrical model for investigating dynamic crankshaft torsional vibrations in piston engines.

TJ182.S4

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

TETEL'BAUM, I. M.

37295. Elektricheskoye modelirovaniye uprugikh system v dinamicheskikh zadachakh stroitel'noy mekhaniki. V sb: povyshenie prochnosti detaley mashin. M. - L., 1949, s. 146-71. - Bibliogr: 16 Nazv.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

TETEL'BAUM, I.M.

ANDREYEV, L.Ye., kandidat tekhnicheskikh nauk; BIDERMAN, V.L., kandidat
    tekhnicheskikh nauk; BOYARSHINOV, S.V., kandidat tekhnicheskikh
    nauk; VOL'MIR, A.S., doktor tekhnicheskikh nauk; DIMENTBERG, F.M.
    kandidat tekhnicheskikh nauk; ZASLAVLEV, S.M., inzhener;
    KINASOSHVILI, R.S., doktor tekhnicheskikh nauk, professor;
    KOVALENKO, A.D.,; MAKUSHIN, V.M., kandidat tekhnicheskikh nauk
    MALININ, N.N., kandidat tekhnicheskikh nauk; PONOMAREV, S.D.,
    doktor tekhnicheskikh nauk; PRIGOROVSKIY, N.I., doktor tekhni-
    cheskikh nauk; TETEL'BAUM, I.M., kandidat tekhnicheskikh nauk;
    UMANSKIY, A.A., doktor tekhnicheskikh nauk, professor; FEODOS'YEV,
    V.I., doktor tekhnicheskikh nauk; SERENSEN, S.V., redaktor;
    TRAPEZIN, I.I., kandidat tekhnicheskikh nauk, redaktor; KARGANOV,
    V.G., inzhener, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor.

[Mechanical engineer's manual; in 6 volumes] Spravochnik mashino-
stroitelia; v shesti tomakh. Izd.2-e, ispr. i dop. Moskva, Gos.
nauchno-tekhn.izd-vo mashinostroit. lit-ry, Vol.3, 1955. 563 p.
    (Mechanical engineering)   (MLRA 8:12)

TETEL'BAUM, I. M.

TETEL'BAUM, I. M.

"Electrical Simulation of Gyroscopic Systems," pp 259-275, ill, 9 ref

Abst;   The basic conditions for simulating mechanical systems on the basis of electromechanical analogy are discussed briefly. The possiblilities of constructing electrical analogs for studying gyroscopic phenomena in mechanics are presented.

Sum 1854

TETEL'BAUM, I. M.   124-11-12423

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p 14 (USSR)

AUTHOR: Tetel'baum, I. M.

TITLE: Electrical Simulation of Gyroscopic Systems. (Elektricheskoye
           modelirovaniye giroskopicheskikh sistem.)

ABSTRACT: A brief explanation of the fundamentals of the representation of mecha-
          nical systems by means of electrical analogs. The investigation com-
          prises the eight-pole electrical systems proposed by the Author for the
          simulation of the bending of a bar. It is noted that the general method
          of the construction of electrical models for problems concerning the
          bending of systems of bars consists in the connection of the eight-pole
          units of the individual bars in a manner consistent with the boundary
          conditions and the conditions of mutual attachment. If at the juncture
          of two bars or sections of a bar an external force or moment is
          applied or a mass is concentrated, or an elastic coupling is installed,
          then the circuitry will include representative models of the force,
          mass, or elasticity of coupling. Expanding this general method, the
          Author investigates electrical models of revolving rotors in an

Card 1/2

124-11-12423

Electrical Simulation of Gyroscopic Systems, (continued)

application to the problem of the determination of the critical speeds of elastic shafts carrying flywheels. The simulation is performed with due consideration to the gyroscopic moments arising from the angular displacements of the axes of the rotating flywheels. The quantity designated θ_0 appears to be not the polar but the axial moment of inertia of the flywheel.

G. A. Slomyanskiy

Card 2/2

TETEL'BAUM, I.M.

LITKENS, I.V., kandidat tekhnicheskikh nauk; TETEL'BAUM, I.M., kandidat tekhnicheskikh nauk, dotsent (Moskva).

Inter-college conference on physical and mathematical modeling. Elektrichestvo 8:93-94 Ag '57. (MIRA 10:9)
(Moscow--Mathematical models--Congresses)

SOV/124-58-10-11724

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 142 (USSR)

AUTHOR: Tetel'baum, I. M.

TITLE: On the Problem of Electrical Analog Simulation of Rod Systems
            (K voprosu ob elektricheskom modelirovanii sterzhnevykh sistem)

PERIODICAL: V sb.: Mezhvuz. konferentsiya po primeneniyu modelirovaniya
             v elektrotekhn. zadachakh i matem. modelirovaniya. Moscow,
             1957, pp 173-174

ABSTRACT: Bibliographic entry

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8(6), 14(6, 10)

SOV/112-59-4-6670

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 41 (USSR)

AUTHOR: Chelnokov, N. I., Tetel'baum, I. M., and Obrezkov, V. I.

TITLE: Calculating the Transient Motion in the Tailrace of a Hydroelectric Station by Means of Electric Simulation

PERIODICAL: V sb.: Mezhvuz. konferentsiya po primeneniyu modelirovaniya v elektrotekhn. zadachakh i matem. modelirovaniya. M., 1957, pp 159-161

ABSTRACT: A method for solving the problem of a transient motion in the tailrace of a hydroelectric station that has a diurnal regulation is described; the method employs mathematical simulation on the basis of an electrical analogy. The problem is solved by electric simulation of a set of Sen-Venan's differential equations. The network consists of capacitors, direct, reverse, and self-conductances, and active fourpoles (cathode followers).

Yu.M.S.

Card 1/1

TETEL'BAUM I. M.

AUTHOR:
1) LEVITSKIY,K.A., Engineer, learned Secretary   105-8-19/20
of the Soviet Committee of the IEC.
2)LITKENS,I.V., cand.techn.sc., Ass.Prof. TETEL'BAUM,I.M.,
cand.techn.sc. (Moscow)

TITLE:
1) XXII. Plenary Meeting of the International Electro-
technical Commission in Moscow. (XXII plenarnaya sessiya
mezhdunarodnoy elektrotekhnicheskoy komissii v Moskve,
Russian)
2) Inter-University Conference on Physical and Mathematical
Modelling. (Mezhvuzovskaya konferentsiya po fizicheskomu
i matematicheskomu modelirovaniyu, Russian)

PERIODICAL: Elektrichestvo,   Nr 8, pp 91 - 94, 1957, (U.S.S.R.)

ABSTRACT:
1) The plenary meeting was held in Moscow from July 2 - 12,
1957. 27 delegations were present and the work was carried
out in 17 technical committees.A survey of the most important
topics treated is given. The next meeting will be held in
July 1958 in Stockholm.

2.) The conference took place from May 9 - 16 in the Moscow
Institute for Power Economy. 70 lectures were held. These
lectures are enumerated here together with the names of
the lecturers.

Card 1/2

1) XXII. Plenary Meeting of the International Electrotechnical
   Commission in Moscow.   105-8-19/20
2) Inter-University Conference on Physical and Mathematical
   Modelling.

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

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81809

16.6800

S/123/59/000/11/53/077

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, No. 11,
pp. 172-173, # 42883

AUTHORS: Tetel'baum, I. M., Chelnokov, N. I.

TITLE: Increasing the Accuracy in Solving Problems with an Analog
          Electronic Computer

PERIODICAL: Tr. Mosk. energ. in-ta, 1958, No. 27, pp. 259-266

TEXT: The authors suggest a method of compensating systematic errors
of linear computing elements of electronic analog computers. If, on the
analog computer a program is composed for the solution of a differential
equation of the second order having the form:

$$A_2 \frac{d^2y}{dt^2} + a_1 f(y) \frac{dy}{dt} + A_0 y = 0 \ldots, \tag{1}$$

on account of the stray parameters of the computing elements additional
members are added, and the machine solves in fact a differential equation
of a higher order, which has the form:

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Increasing the accuracy in Solving Problems with an Analog Electronic Computer

$$a_2 n \frac{d^{2n}y}{dt^{2n}} + \dots + a_3 \frac{d^3 y}{dt^3} + A_2 \frac{d^2 y}{dt^2} + a_1 f(y) \frac{dy}{dt} + A_o y = 0 \dots, \qquad (2)$$

where the coefficient a_1 for $i = 3, 4 \dots 2n$ is considerably lower than the basic coefficients A_2 and A_o. In those cases when the magnitude of the coefficient a_1 is comparable with the magnitudes of the coefficient a_1, the effect of stray parameters may considerably alter the solution obtained. In the case of a_1 0 $(i = 3, 4, \dots 2n)$, the solution of the equation (2) has the following form:

$$y = y_o \sin(\omega_o t + \varphi); \qquad o = \sqrt{\frac{A_o}{A_2}} \dots \qquad (3)$$

The method of showing and compensating systematic errors of the computing elements consists in the temporary setting of the coefficient $a_1 = 0$ in the machine program, composed for the solution of the equation (1), and working out the solution. A difference of the obtained solution from (3) proves the presence of systematic errors, which can be compensated by selecting experimentally some negative or positive damping coefficient a and some correction A

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Increasing the Accuracy in Solving Problems with an Analog Electronic Computer

for the magnitude A_0, the insertion of which leads to a solution in the form of (3). After the compensation of errors, the coefficient a_1 is inserted and the required solution of the given equation (1) is obtained. In this way the errors of linear computing elements only mainly integrating ones, can be compensated. In order to illustrate the application of the suggested method, the authors analyze the solution of a non-linear differential equation of the 2nd order on the MN-2 machine. There are 4 figures, 2 tables, and 4 references.

Sh. A. V.

Card 3/3

OBREZKOV, V.I., kand.tekhn.nauk, dotsent; TETEL'BAUM, I.M., kand. tekhn.
nauk, dotsent; CHELNOKOV, N.I., starshiy prepodavatel'

Using electric simulation for the calculation of unsteady motion in
the tail water of hydroelectric power stations. Trudy MEI no.30:
35-50 '58.   (MIRA 12:5)

1.Moskovskiy ordena Lenina energeticheskiy institut, Kafedra
avtomatiki, telemekhaniki i matematicheskikh mashin (for Tetel'baum,
Chelnokov). 2.Moskovskiy ordena Lenina energeticheskiy institut,
Kafedra gidroenergetiki (for Obrezkov).
        (Hydroelectric power stations—Electromechanical analoties)

28(2)   PHASE I BOOK EXPLOITATION   SOV/2655

Tetel'baum, Il'ya Markovich

Elektricheskoye modelirovaniye (Electric Analoging) Moscow, Fizmatgiz,
    1959. 319 p. 10,000 copies printed.

Ed.: V.Yu. Nevrayev; Tech. Ed.:   S.N. Akhlamov.

PURPOSE: This book is intended as a handbook for engineers and as a textbook
    for students specializing in analog computing techniques at polytechnical
    and electrical engineering schools of higher education.

COVERAGE: This book explains the fundamental ideas underlying the construction
    of electrical analog devices and the principles of their application. The
    book consists of three parts. In the first part, the general characteristics
    of analoging methods are given and a study is made of similitude problems and
    analoging precision. The second part is devoted to the analoging of physical
    systems, that is to problems on the solution of ordinary differential equations

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by means of direct analogs, structural and matrix models. In the third part
a study is made of the solution of boundary-value problems on models in the
form of electrically conducting media and electric grids. The book is based
on a course taught by the author at the Moscow Power Engineering Institute.
No personalities are mentioned.There are 27 references: 26 Soviet and 1 English.

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PART II.- ELECTRICAL ANALOGING OF PHYSICAL SYSTEMS

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PART III.   ELECTRICAL ANALOGING OF PHYSICAL FIELDS

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24.. Electrointegrators for solution of boundary value problems
     of mathematical physics   305

Basic Literature   318

AVAILABLE: Library of Congress

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OBREZKOV, V.I.; TETEL'BAUM, I.M.; CHELNOKOV, N.I.

Using a continuous action electronic computer for calcu-
lation of the unsteady motion in the tail water of a hydro-
electric power station. Nauch.dokl.vys.shkoly; energ. no.2:
103-114 '59.   (MIRA 13:1)
            (Hydroelectric power stations)

IVANOV.-SMOLENSKIY, A.V.; TETEL'BAUM, I.M.

Interuniversity Conference on the use of Physical and
Mathematical Modeling in the Electrotechnical Problems. Izv.
vys.ucheb.zav.; elektro-mekh. 3 no.1:145-147 '60.
                                        (MIRA 13:5)

1. Predsedatel' sektsii fizicheskogo modelirovaniya Mezhvuzov-
skoy konferentsii po primeneniyu fizicheskogo i matematicheskogo
modelirovaniya v elektrotekhnicheskikh zadachakh i Moskovskiy
energeticheskiy institut (for Ivanov-Smolenskiy). 2. Predsedatel'
sektsii-matematicheskogo modelirovaniya Mezhvuzovskoy konferentsii
po primeneniyu fizicheskogo i matematicheskogo modelirovaniya
v elektrotekhnicheskikh zadachakh i Moskovskiy energeticheskiy
institut (for Tetel'baum).
    (Engineering models) (Electric engineering)

S/144/60/000/01/019/019
E073/E135

AUTHORS: Ivanov-Smolenskiy, A.V., Chairman of the Section on
             Physical Modelling,
             Tetel'baum, I.M., Chairman of the Section on
             Mathematical Modelling

TITLE: Inter-College Conference on Applying Physical and
             Mathematical Analogues in Electrical Problems

ABSTRACT: This conference was held at the Moscow Power Institute
             from October 26th to 30th, 1959.   Six hundred
             representatives of teaching and research establishments,
             design organisations and industry participated, and also
             guests from Poland, Czechoslovakia and China.   There
             were two sections, one relating to physical analogues
             and the other to mathematical analogues. In the section
             on physical analogues there were 52 papers and discussion
             contributions by representatives of 14 organisations.

             In the section on mathematical analogues there were
Card   57 papers and contributions from personnel of
1/9   37 organisations.   Compared to an earlier conference in

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Inter-College Conference on Applying Physical and Mathematical Analogues in Electrical Problems

1957, the range of the investigations was considerably wider. In the section on physical analogues the following problems were considered.

a) General problems of the theory of analogy and simulation as applied to problems of electrical and power engineering (papers by V.A. Venikov (MEI), I.M. Kirko (Acad.Sci. Latvian SSR), N.N. Tikhodeyev (NIIPT) and V.M. Breytman).

b) Application of physical simulation and the theory of analogy for investigating electromagnetic phenomena: In electrical machinery - A.V. Ivanov-Siolenskiy (MEI), Ya.B. Danilevich (IEM Acad.Sci. USSR); In magnetic hydrodynamics - I.M. Kirko, M.V. Filippov, O.A. Liyelausis, A.E. Mikel'son (Institute of Physics, Acad.Sci. Latvian SSR); In Ferromagnetic cylinders, in magnetic fields and in electromagnets, I.M. Kirko. T.K. Kalnin', G.K. Grinberg (Institute of Physics, Acad.Sci. Latvian SSR);

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Analogues in Electrical Problems

In magnetic amplifiers and steel-core induction coils,
E.Ya. Yakubaytis and V.P. Glukhov (Institute of Power and
Electrical Engineering, Acad. Sci. Latvian SSR);
In an arc and in corona, A.S. Maykopar (VNIIE) and
G.N. Aleksandrov (LPI).

c) Application of physical simulation and the theory of
analogy to investigating certain non-electrical phenomena
in power equipment:
Mechanical phenomena - I.D. Urusov, V.F. Fedorov (IEM
Acad.Sci.USSR);
Thermal and hydraulic phenomena - V.P. Anempodistov and
N.N. Anempodistov (IEM Acad.Sci. USSR);

d) Application of the theory of analogy to the solution
of technical and economic problems:
(V.A. Venikov, Yu.N. Astakhov (MEI) and V.G. Kadeyshvili
(Acad.Sci. Georgian SSR);

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e) Method of calculation and design of dynamic and static
analogues of a.c. and d.c. electrical systems:

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Synchronous generators - L.A. Sukhanov and E.G. Kosharskiy
(IEM Acad.Sci. USSR);
Transformers - L.A. Sukhanov, V.K. Sirotko, G.M. Smolin
(IEM Acad.Sci. USSR), M.S. Libkind. V.A. Tsvetkov
(ENIN Acad.Sci. USSR);
Transmission lines - V.I. Ivanov, V.K. Sirotko.
G.M. Smolin (IEM Acad.Sci. USSR);
Converter equipment - A.V. Stukachev, N.S. Lazarev (VEI);
Prime movers and synchronous generators - A.A. Aslamazyan
(IEG Acad.Sci. Armenian SSR), D.V. Nikitin (MEI);
f) Investigation of regimes of operation for electrical
systems:
Using dynamic analogues of electrical systems -
V.V. Voskresenskiy, Kh.F. Barakayev, L.V. Travin (VEI)
and I.D. Urusov, V.F. Fedorov (IEM Acad.Sci. USSR);
Using mathematical analogue computers - Yu.M. Gorskiy (MEI),
V.S. Tarasov, A.I. Vazhnov, Yu.V. Rakitskiy, V.V. Popov
and A.N. Semenova (LPI), Ya.N. Luginskiy, M.G. Portnoy
Card   (VNII), G.V. Mikhnevich, G.F. Kozlovskiy (ENIN Acad.Sci.
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E073/E135

Inter-College Conference on Applying Physical and Mathematical Analogues in Electrical Problems

  The following problems were discussed.
a) Simulation of fields in continuous media: development and use of methods and apparatus for simulation of fields by means of electrically conducting paper. On this problem the following contributed: P.F. Fil'chakov and V.I. Panchishchin (Institute of Mathematics, Acad.Sci. USSR), N.I. Druzhinin (VIGM), M.M. Litvinov (TsIAM), V.P. Buldey (Academy for Building and Architecture, Ukr.SSR), N.I. Burlakov (Ukrgiprovodkhoz), A.A. Glushchenko (KGU), G.A. Ryazanov (Leningrad Water Institute), A.F. Fikin (VITR), A.S. Rozenkrants (IEI). New work in the field of plotting and using "trajecto-graphs": G.A. Tyagunov, K.A. Gorozhankin, A.A. Zhigarev; G.P. Prudkovskiy, E.N. Tsyganov (MIFI), I.M. Bleyvas (NII MRTP), Ye.Ye. Bykhovskaya, A.M. Kharchenko (Institute of Radio Engineering and Electronics). New applications of the method of continuous media: Yu.A. Birzvalk, L.V. Nitsetskiy (Acad.Sci. Latvian SSR),

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E.K. Yankon (Riga Polytechnical Institute),
K.S. Demirchan, V.V. Pruss-Zhukovskiy (LPI),
G.Ya. Murav'yeva and V.N. Rudakov (LETI), K.P. Tepilin
(NII GKS), N.I. Druzhinin (VIGM), G.A. Ryazanov
(Leningrad Water Institute).

b) Application of electrical networks, computer tables
and equivalent circuits.
Development of new types of electrical circuits and
equipment for such circuits - P.M. Belash and G.M. Zdorov
(All-Union Oil-Gas Research Institute). K.N. Seleznev and
A.I. Taranin (TsKTI im. Polzunov), M.D. Golovko (TsNIIS
Mintransstro), A.I. Leushin (Kuybyshev Industrial
Institute), G.Ye. Pukhov (Computing Centre, Acad.Sci.USSR).
New applications of networks and circuits to problems of
underground hydraulics - P.M. Belash, A.L. Goflin (All-
Union Oil-Gas Research Institute).
Card   Heat transmission - A.T. Lavrova and A.Ye. Surminskiy
6/9   (TsIAM).

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Theory of elasticity - V.M. Samus' (Kiyev Institute GVF),
N.V. Korol'skv (VTs Acad.Sci. USSR), L.V. Nitsetskiy
(Acad.Sci. Latvian SSR), A.K. Kuznetsova (NIS Gidro-
provekt), A.V. Amel'yanchik (TsIAM).
Investigation of Magnetic Circuits on computing tables -
A.S. Rozenkrants (Ivanov Power Institute).

c) Development of continuous operation in iteration
equipment, with subsequent processing of the information
for solving equations with partial derivatives:
G.Ye. Pukhov (Kiyev Institute GVF), L.A. Vulis,
A.T. Luk'yanov, A.A. Kostritsa, N.U. Isayev (Kazakh
State University, I.M. Tetel'baum (MEI).

d) Simulation of dynamic problems: I.K. Pchelin,
A.S. Golovanov (TsNIIS), I.M. Tetel'baum, N.I. Chelnokov
(MEI), A.M. Ashavskiy (TsKB Ministry of Geology USSR),
A.A. Khachaturov, I.K. Pchelin (Moscow Road Institute),
R.V. Roytenberg (VABTV), A.Ye. Ordinovich (Physics
Faculty, Moscow State University), A.T. Lavrova (TsIAM),

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Inter-College Conference on Applying Physical and Mathematical Analogues in Electrical Problems

A.V. Dabag'yan (KhPI), V.A. Bebikhov (GIFTI), O.L. Shekhter (Institute for Foundations).

e) Development of new elements for analogues of non-linear dynamic systems: Yu.L. Kozlenko, P.N. Kupriyanchik.

The accuracy of the analogues, particularly in power systems, is determined not only by the analogue circuits, but also by the accuracy of the parameters of the objects to be investigated. Therefore the participants of the conference recommended that manufacturers of electrical machinery, transformers and inductance coils should include in their documentation a guaranteed accuracy with which the individual parameters have been determined and also the conditions under which these parameters will have the guaranteed values. The individual works should develop methods of calculation of the dependence of the individual parameters of their equipment on magnetic saturation and frequency. It was emphasized that it is desirable to give, in lectures on mathematics, physics and other engineering subjects, a more accurate treatment

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of various problems, and to include information on the
fundamentals of computer engineering, mathematical and
physical analogues. It was also recommended that
physical and mathematical analogues should be used to a
greater extent in laboratory work and lectures in
teaching establishments. It was pointed out that the
use of analogue techniques is hindered by the lack of
materials, components and assemblies such as:
amplifiers, electrically conducting paper, portable
resistance boxes, inductances and capacitances, complete
analogues, computers. The need to organise production
of these elements on an industrial scale in the USSR was
emphasized. More is to be published in literature on
this subject, and particularly the journals
Elektrichestvo and Izvestiya VUZ Elektromekhanika will
be asked to include a special section on physical and
mathematical analogues.
There are no figures, tables or references.

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S/105/60/000/08/20/023
B012/B058

AUTHORS: Ivanov-Smolenskiy, A. V., Docent, Candidate of Technical Sciences, Tetel'baum, I. M., Docent, Candidate of Technical Sciences

TITLE: Conference of the Schools of Higher Learning on Physical and Mathematical Simulating

PERIODICAL: Elektrichestvo, 1960, No. 8, pp. 89 - 91

TEXT: The Conference of the schools of higher learning on the application of physical simulating for electrotechnical problems and on the electro-technical methods of mathematical simulating was held at the Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering) from October 26 to 30, 1959. This Conference served for the exchange of ex-periences and information in the field mentioned. It was attended by 600 delegates from the USSR as well as 12 delegates from Poland, Czecho-slovakia and the Chinese People's Republic. 52 lectures were held in the section for physical simulating and 57 in the section for mathematical simulating. M. P. Kostenko opened the Conference. V. A. Venikov reported

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Conference of the Schools of Higher
Learning on Physical and Mathematical
Simulating

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on "Analysis and Experiment, Simulating and Cybernetics in Engineering
Practice". I. M. Tetel'baum reported on "Main Trends for the Development
of the Methods of Mathematical Simulating". Lectures were held by the
following persons: I. M. Kirko, "On the Similarity Criteria of Dimen-
sions". T. K. Kalnin' and I. M. Kirko reported on the simulating of
electromagnets, maintaining the similarity of the temperature gradient.
A. E. Mikel'son showed the possibility of simulating a turbulent con-
vection caused by electromagnetic volume forces in liquid metals in the
exchange of one metal by the other. O. A. Liyelausis gave the results
of an evaluation by means of the similarity method of experimental in-
vestigations of a flat flow of mercury through a narrow slit in the
magnetic field perpendicular to the flow. I. M. Kirko and M. V.
Filippov reported on the influence of the longitudinal magnetic field
on the suspended layer of ferromagnetic particles in a nonconductive
liquid. G. K. Grinberg reported on the similarity criteria for solid
and hollow ferromagnetic cylinders magnetized in a homogenous constant
field. V. M. Breytman (Leningrad) reported on the possibility of deter-
mining a similarity of phenomena occurring under changing conditions.

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Learning on Physical and Mathematical   B012/B058
Simulating

N. N. Tikhodeyev (Nauchno-issledovatel'skiy institut postoyannogo toka
(Direct Current Scientific Research Institute)) formulated the funda-
mental theses of physical simulating applied on problems from electro-
nics. G. N. Aleksandrov (Leningradskiy politekhnicheskiy institut
(Leningrad Polytechnic Institute)) reported on the possibility of apply-
ing the similarity theory for the generalization of the characteristic
of the total corona on split conductors of long-distance lines. A. S.
Maykopar (Vsesoyuznyy nauchno-issledovatel'skiy institut elektro-
energetiki (All-Union Scientific Research Institute of Electric Power
Engineering)) gave the results of the investigation of the electric arc
with the aid of a physical simulator. A. V. Ivanov-Smolenskiy
(Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineer-
ing)) reported on the physical simulating of multipole machines, main-
taining the similarity of electromagnetic fields. Ya. B. Danilevich
(Institut elektromekhaniki AN SSSR (Institute of Electromechanics of the
AS USSR)) reported on the use of synchronous generators of dynamic
simulators for the experimental checkup of various calculation methods
of the damping winding of large-sized machines with salient poles. E. A.

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Yakubaytis and V. P. Glukhov (Institut energetiki i elektrotekhniki AN
Latviyskoy SSR (Institute of Power Engineering and Electrotechnics of the
AS Latviyskaya SSR)) proved the possibility of simulating magnetic
amplifiers and reactors with steel on a simulator geometrically dissi-
milar to the original with a core of another ferromagnetic material.
I. D. Urusov and V. M. Podrez, as well as V. P. Anempodistov and
N. N. Anempodistova reported on the simulating of nonelectric pheno-
mena in electric machines. V. A. Venikov and Yu. N. Astakhov (Moscow
Institute of Power Engineering), as well as V. G. Kadeyshvili (Institut
energetiki AN Gruzinskoy SSR (Institute of Power Engineering of the
AS Gruzinskaya SSR)) showed the possibility of applying the similarity
theory for the designing of power engineering objects. E. G. Kosharskiy
and L. A. Sukhanov (Institute of Electromechanics of the AS USSR) re-
ported on the designing of dynamic simulators of high-power turbo-
generators. V. K. Sirotko, G. M. Smolin, and L. A. Sukhanov gave a
method for the approximate calculation of the parameters of simulation
transformers, as well as the data of such types designed at the
Institute of Electromechanics of the AS USSR. M. S. Libkind and V. A.

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Tsvetkov (Institute of Power Engineering of the AS USSR) reported on the
experience in the design and operation of a long-distance line simulator
for the investigation of overvoltages. A. V. Stukachev, V. V. Voskresen-
skiy, V. V. Khudyakov and others reported on problems from the theory of
simulating and designing of d.c. long-distance line simulators and gave
the results obtained on working simulators. D. V. Nikitin (Moscow
Institute of Power Engineering), A. A. Aslamzyan and B. L. Buniatyan
(Vodnoenergeticheskiy institut AN Armyanskoy SSR (Hydraulic Power
Engineering Institute of the AS Armyanskaya SSR)) reported on the im-
portance of the simulating of water turbines for the production of
physical simulators of power networks. V. S. Tarasov, Yu. V. Rakitskiy,
V. A. Mushnikov, A. I. Vazhnov, V. V. Popov, L. N. Semenova (Leningrad
Polytechnic Institute), Yu. M. Gorskiy (Moscow Institute of Power
Engineering), Ya. N. Luginskiy and M. G. Portnoy (All-Union Scientific
Research Institute of Electric Power Engineering), G. V. Mikhnevich and
G. F. Kozlovskiy (Institute of Power Engineering of the AS USSR) gave
in their lectures the methods worked out by them for the use of domestic
simulators, as well as the results of the investigations conducted on

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them. **P. F. Fil'chikov** and **V. I. Panchishin** reported on the apparatus
for the simulating of fields with the aid of a conductive paper
(Integrator) ЭГДА-8/56 (EGDA-8/56) of the Institut matematiki AN USSR
(Mathematical Institute of the AS UkrSSR)), **M. M. Litvinov** reported on
the same subject (Electrointegrator ЭТА-2 (ETA-2), of the **TsIAM**). N. I.
Druzhinin (VIGM), V. R. Buldey (Akademiya stroitel'stva i arkhitektury
USSR (Academy of Civil Engineering and Architecture of the UkrSSR)),
N. N. Burlakov (Ukrgiprovodkhoz), A. A. Glushchenko (Kiyevskiy
gosudarstvennyy universitet (Kiyev State University)), G. A. Ryazanov
(Leningradskiy institut vodnogo transporta (Leningrad Institute of
Water Transportation)), A. S. Rozenkrants (Ivanovskiy energeticheskiy
institut (Ivanovo Institute of Power Engineering)) and A. F. Fokin
(VITR) reported on the use of conductive paper. **G. Ya. Murav'yeva** and
V. N. Rudakov (Leningradskiy elektrotekhnicheskiy institut (Leningrad
Electrotechnical Institute)) reported on the simulating of fields with
the aid of plastic conductors. Yu. A. Birzvalk, L. V. Nitsetskiy
(Institut fiziki AN Latviyskoy SSR (Institute of Physics of the AS
Latviyskaya SSR)), E. K. Yankop (Rizhskiy politekhnicheskiy institut

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(Riga Polytechnic Institute)), K. S. Demirchyan and V. V. Pruss-Zhukov-
skiy (Leningrad Polytechnic Institute), N. I. Druzhinin (VIGM), G. A.
Ryazanov (LIVT), K. P. Tenilin (NII GKS) reported on the use of the
electrolytic bath for problems from electrodynamics, the subterranean
hydraulics, etc. G. A. Tyagunov, K. A. Gorozhankin and A. A. Zhigarev
(Moskovskiy inzhenerno-fizicheskiy institut (Moscow Physics and
Engineering Institute)) gave new types of "trajectographs", G. P.
Prudkovskiy, G. A. Tyagunov, E. N. Tsyganov (Moscow Physics and Engineer-
ing Institute), Ye. Ye. Bykhovskaya, A. M. Kharchenko (Institut rauio-
tekhniki i elektroniki (Institute of Radio Engineering and Electronics))
and I. M. Bleyvas (NII GKRE) reported on the automatic construction of
trajectories of loaded particles. P. M. Belyash and G. M. Zdorov (Vse-
soyuznyy nauchno-issledovatel'skiy neftegazovyy institut (All-Union
Scientific Research Institute of Petroleum Gas)) reported on very large
highly automatized networks with collection and interpretation of in-
formation. A. I. Leushin (Kuybyshevskiy industrial'nyy institut
(Kuybyshev Industrial Institute)) showed the elementary ways for the
setup of a network for the simulating of an arc furnace. M. D. Golovko
(TsNIIS Mintransstroya), V. M. Samus' (Kiyevskiy institut GVF (Kiyev

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I nstitute GVF)), L. V. Nitsetskiy (AS Latviyskaya SSR), A. K. Kusnetsova
(NIS Gidroproyekta) and A. V. Amel'yanchik (TsIAM) reported on the appli-
cation of networks and chain circuits for problems of the elasticity
theory. P. M. Belash, A. L. Goflin (All-Union Scientific Research In-
stitute of Petroleum Gas) and N. V. Korol'kov (Vychislitel'nyy tsentr
AN SSSR (Calculation Center of the AS USSR)) reported on problems of
subterranean hydraulics. K. N. Seleznev and A. I. Taranik (TsKTI im.
Polzunova (TsKTI imeni Polzunov)), A. T. Lavrova and A. Ye. Surminskiy
(TsIAM) reported on problems of heat transmission?\ The Conference dis-
cussed the realization of new analogue installations With continuous
interpretation of the information, for the solution of nonlinear bound-
ary problems of mathematical physics in the first place. G. Ye. Pukhov
(Vychislitel'nyy tsentr AN USSR (Calculation Center of the AS UkrSSR)),
L. A. Vulis, A. T. Luk'yanov, A. A. Kostritsa. N. U. Isayev (Kazakhskiy
gosudarstvennyy universitet (Kazakh State University)) and I. M.
Tetel'baum (Moscow Institute of Power Engineering) reported on this
subject. Yu. L. Kozlenko and P. N. Kupriyanchik gave the results of the
development of new installations and elements of simulators of nonlinear

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dynamic systems. The reports by A. A. Khachaturov and I. K. Pchelin
(Moskovskiy avtodorozhnyy institut (Moscow Automobile Highway Institute)),
V. M. Kalekin (Khar'kovskiy institut zheleznodorozhnogo transporta (Khar'-
kov Institute of Railroad Transportation)), Yu. L. Favorov (KhIZhDT),
A. T. Lavrova (TsIAM), A. V. Dabag'yan (Khar'kovskiy politekhnicheskiy
institut (Khar'kov Polytechnic Institute)), I. K. Pchelin and A. S.
Golovachev (TsNIIS MPS) dealt with the solution of problems of dynamics
on such installations. I. M. Tetel'baum, N. I. Chelnokov (Moscow Institu-
te of Power Engineering), A. M. Ashavskiy (TsKB Ministerstva geologii
SSSR (TsKB of the Ministry of Geology of the USSR), R. V. Roytenberg
(VABTV), A. Ye. Ordanovich (Fizicheskiy fakul'tet Moskovskogo universi-
teta (Department of Physics of Moscow University)), V. A. Bebikhov
(GIFTI) and O. L. Shekhter (Institut osnovaniy i fundamentov (Institute
of Supports and Foundations)) reported on the use of setup-simulators
(electronic simulators) for problems of dynamics. A. S. Rozenkrants
(Ivanovo Institute of Power Engineering) reported on the simulating of
magnetic circuits on a network analyzer. N. I. Chelnokov (Moscow Insti-
tute of Power Engineering) reported on the simulating of nonstabilized

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BO12/BO58

internal fluid motion in open water currents.

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TETEL'BAUM, I. M.   Moscow Inst. Power Engr., Crh of Automation, Telemechanics and Mathematical Machinery, and ELMESHAD, Y. A. (United Arab Rep., Postgraduated at same Inst.)

"Simulation of Diffusion equation at successive time intervals in Electrolytic Tanks."

report to be submitted for the Third Intl. Conference of Analogue Computation. Belgrade, Yugoslavia, 4-9 Sep 1961.

TETEL'BAUM, I.M., red.; IVANOV-SMOLENSKIY, A.V., red.

[Papers delivered at the Inter-university Conference on the
Use of Physical and Mathematical Modeling in Various Fields
of Technology] Doklady Mezhvuzovskoy konferentsii po prime-
neniiu fizi cheskogo i matematicheskogo modelirovaniia v raz-
lichnykh otrasliakh tekhniki. 4th. Moskva, Mosk. energ.
in-t. Vol.3.[Use of mathematical modeling methods in engineer-
ing studies] Primenenie metodov matematicheskogo modelirovaniia v
inzhenernykh issledovaniiakh. 1962. 346 p. Vol.4.[Similarity
theory and physical modeling methods as applied to electro-
technical problems] Teoriia podobiia i metody fizicheskogo mode-
lirovaniia v primenenii k elektrotekhnicheskim zadacham. 1962.
482 p.   (MIRA 16:3)

1. Mezhvuzovskaya konferentsiya po primeneniyu fizicheskogo i ma-
tematicheskogo modelirovaniya v razlichnykh otraslyakh tekhniki.
4th. (Engineering—Mathematical models) (Dimensional analysis)
        (Electric engineering—Mathematical models)

TETEL'BAUM, I.M., red.; LITKENS, I.V., red.

[Reports of the Interuniversity Conference on the Use of
Physical and Mathematical Simulation in Different
Technological Fields]Doklady chetvertoy mezhvuzovskoy kon-
ferentsii po primeneniiu fizicheskogo i matematicheskogo
modelirovaniia v razlichnykh otrasliakh tekhniki. Moskva,
Mosk.energ.in-t. Vol.1. [Mathematical simulation of fields]
Matematicheskoe modelirovanie polei. 1962. 257 p.
Vol.2.[Use of mathematical simulation and digital computers
in the solution of power engineering problems]Primenenie ma-
tematicheskogo modelirovaniia i tsifrovykh vychislitel'nykh
mashin dlia resheniia energeticheskikh zadach. 1962. 365 p.
                                        (MIRA 15:9)
1. Mezhvuzovskaya konferentsiya po primeneniyu fizicheskogo
i matematicheskogo modelirovaniya v razlichnykh otraslyakh
tekhniki. 4th.
    (Electric fields)   (Electromechanical analogies)
                     (Power engineering)

S/196/62/000/024/002/014
E194/E155

AUTHORS: Tetel'baum, I.M., and Yel'meshad, Ya.A.

TITLE: Electrical modelling of transient processes of heat
             transmission and diffusion in an electrolytic tank

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika,
             no.24, 1962, 8, abstract 24 A 32. (Dokl. 4-y Mezhvuz.
             konferentsii po primeneniyu fiz. i matem. v razlichn.
             otraslyakh tekhn. Sb.1. (Reports of ne 4th Inter-
             Collegiate Conference on the Application of Physics
             and Mathematics in various Branches of Technology.
             Colle. .on 1). Moscow, 1962, 165-182).

TEXT: A step-oy-step analogue solution of two-dimensional
non-linear equations of diffusion is obtained in the form of
potential distribution over the surface of the tank: the thickness
of the electrolyte yer is made proportional to the square root
of the time step. In solving a uniform linear equation, electrodes
are used to lay out on the bottom of the tank the potentials
obtained on the surface in the previous step. In e ations of
general form the effects of non-linearity and non-uniformity are

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Electrical modelling of transient ...   S/196/62/000/024/002/014
                                         E194/E155

allowed for by laying out on the bottom of the tank suitably
recalculated potential values. A single computational device is
used to calculate the values of the potentials of each electrode
in turn.
3 references.

[Abstractor's note. Complete translation.]

Card 2/2

LYUSTERNIK, L.A., otv. red.; VOLYNSKIY, B.A., kand. tekhn. nauk,
zam. otv. red.; LUK'YANOV, V.S., doktor tekhn. nauk, red.;
PUKHOV, G.Ye., red.; TETEL'BAUM, I.M., doktor tekhn. nauk,
red.; MEL'NIK, T.S., red.

[Analog methods and techniq ies for solving boundary value
problems; transactions of the All-Union Conference, Moscow,
October 1962] Analogovye metody i sredstva resheniia krae-
vykh zadach; trudy Vsesoiuznogo soveshchaniia, Moskva, ok-
tiabr 1962 g. Kiev, Naukova dumka. 1964. 354 p.
(MIRA 17:12)

1. Chlen-korrespondent AN SSSR (for Lyusternik). 2. Chlen-
korrespondent AN Ukr.SSR (for Pukhov).

L 10485-66

ACC NR: AP6003541   SOURCE CODE: RU/0011/65/009/001/0001/0003

AUTHOR: Tetelbaum, I. M.—Tetel'baum, I. M. (Professor; Doctor); Petresou, A.—
Petresku, A. (Engineer; Candidate of technical sciences)

ORG: none

TITLE: New modelling method of boundary condition problems in fields with variable
common boundary by means of electric networks

SOURCE: Automatica si electronica, v. 9, no. 1, 1965, 1-3

TOPIC TAGS: boundary value problem, mathematic method, electric engineering, electric
network, electric transformer, differential solution

ABSTRACT: The authors show the theoretical justification for a novel method of solving
boundary condition problems in fields with a variable common boundary, by means of
electric circuits with transformers. The requirements that must be met by the trans-
formers in order to minimize errors are determined. Orig. art. has: 3 figures,
17 formulas. [JPRS]

SUB CODE: 12, 09 / SUBM DATE: none / OTH REF: 001 / SOV REF: 002

Card 1/1   UDC: 621.317.2.001.57: 517.946.9

SHLYKOV, Fedor Mikhaylovich, starshiy prepodavatel'; SHEKHVITS, Eliya
Isaakovich, kand. tekhn. nauk, dotsent; TETEL'BAUM, Il'ya
Markovich, kand. tekhn. nauk, dotsent; CHELNOKOV, Nikolay
Ivanovich, starshiy prepodavatel'; SHNEYDER, Yuliy Romanovich

Electrical simulation of the dynamics of the drive of a mechanism
with reduced varying moment of inertia. Izv. vys. ucheb. zav.;
elektromekh. 5 no.6:602-610 '62.   (MIRA 15:10)

1. Kafedra vychislitel'noy tekhniki Moskovskogo energeticheskogo
instituta (for Shlykov, Tetel'baum). 2. Kafedra teorii mekhaniz-
mov i mashin Vsesoyuznogo zaochnogo mashinostroitel'nogo insti-
tuta (for Shekhvits). 3. Nachal'nik vychislitel'nogo tsentra
kafedry vychislitel'noy tekhniki Moskovskogo energeticheskogo
instituta (for Chelnokov). 4. Vedushchiy inzhener vychislitel'-
nogo tsentra kafedry vychislitel'ncy tekhniki Moskovskogo
energeticheskogo instituta (for Shneyder).

(Electric driving)
(Electromechanical analogies)

TETEL'BAUM, I.M.; CHELNOKOV, N.I.

Solution of engineering problems using electronic analog computers. Trudy MEI no.41:153-172 '62.   (MIRA 16:7)

(Electronic analog computers)
(Electromechanical analogies)

TEYTEL'BAUM, F. M.

Khrushcnova, V. A., Levina, A. V. and Teytel'baum, F. M. "Allergic conditions during scarlet fever and methods for their detection," in symposium: Skarlatina i streptokokkovyye infektsii, Leningrad, 1948, p. 121-36 - Bibliog: 14 items

So: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

TEYTEL'BAUM F. M.

Teytel'baum, F. M. and Levina A. V. "Serum types of hemolytic streptococcus in scarlet fever clinics," in symposium: Skarlatina i streptokokkovyye infektsii, Leningrad, 1948, p. 88-98 - Bibliog: 10 items

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1952

TEYTEL'BAUM, G. N.

PA 14/49 T60

USSR/Medicine - Typhus   Jun 48
    Medicine - Blood

"Hemodynamic Abnormality Due to Exanthematous
Typhus," G. N. Teytel'baum, Lt Col Med Sv; Ye. M.
Bylinkina, Chair of Infectious Diseases, Mil Acad
imeni S. M. Kirov, $8\frac{1}{4}$ pp

"Klin Med" Vol XXVI, No 6

Report of observations shows how artery, pulse
and venous pressure, blood counts, and circulation
rate are affected by typhus.

14/49T60